

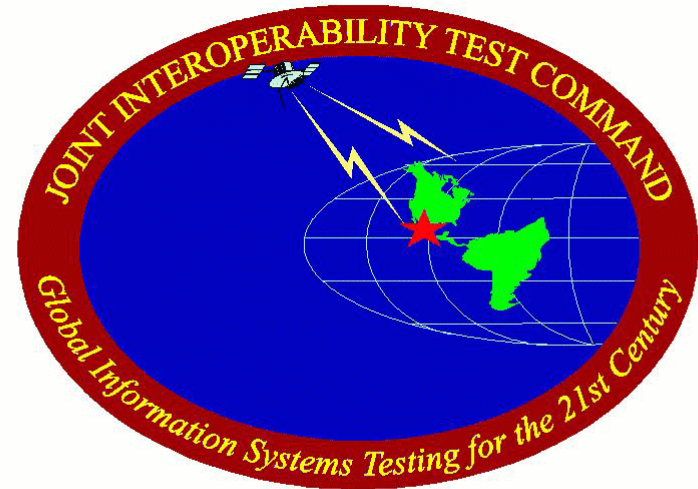


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09 Sep 2004

UNIT PRESENTATIONS

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GROUND MULTIBAND TERMINAL JOINT INTEROPERABILITY TEST COMMAND

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9 September 2003

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GMT SYSTEM OVERVIEW



- **Two system configurations**
 - Vehicle Mounted
 - Transit Case
- Quad Band (C, X, Ku, Ka)
- 9.6 Kbps to 50 Mbps

- **Spoke to Dual Hub operation**
 - Transmit – 1 or 2 uplinks (Dual Antenna)
 - Receive – 1 to 12 downlinks





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INTEROPERABILITY REQUIREMENTS MATRIX

DOD X-BAND TERMINALS

TERMINAL NAME/NOMENCLATURE	MODEM	CRITICAL INTERFACE YES/NO
AN/FSC-78B, AN/FSC-78C, AN/GSC-39B, AN/GSC-39C, AN/GSC-52, AN/GSC-52 Mod, AN/GSC-52 Mod Restoral Terminal	OM-73	YES
AN/TSC-100A, AN/TSC-85B, AN/TSC-86A, AN/TSC-86B, AN/TSC-86C, AN/TSC-93B, AN/TSC-94A	MD-945	YES
AN/TSC-85C , AN/TSC-93C, AN/TSC-85D, AN/TSC-93D	L3 3501-01	YES
AN/TSC-152, AN/USC-59 (LMST IV)	SLM-8650	YES
DDST, AN/USC-60A , LST-8000, TCS-3000 (AN/MSQ-126)	SLM-8650	YES
AN/WSC-6(V)	CQM-248	YES
DMCS, TST	DMD-15	YES
AN/USC-65 (LMST V)	VLM-7650M-3	YES
Phoenix	TBD	YES
TMET, TFT	TBD	YES

Equipment shown in **bold** letters are available at JITC

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INTEROPERABILITY REQUIREMENTS MATRIX (Cont'd)

DOD C-and Ku-BAND TERMINALS

TERMINAL NAME/NOMENCLATURE	MODEM	CRITICAL INTERFACE YES/NO
AN/TSC-152, AN/USC-59 (LMST IV)	SLM-8650	YES
AN/USC-65 (LMST V)	VLM-7650M-3	YES
AN/USC-60A /LST-8000, AN/TSC-143, TCS-3000, DDST	SLM-8650	YES
DMCS, TST	DMD-15	YES
Phoenix	TBD	YES
TMET, TFT	TBD	YES
DOD Teleport	TBD	YES

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INTERFACE REQUIREMENTS MATRIX

Baseband Interfaces

INTERFACES	CRITICAL INTERFACE YES/NO
AN/FCC-100(V)	YES
IDNX/Promina	YES
ICAP	YES
TRI-TAC	YES
Canoga Perkins	YES
Parigain	YES

Equipment shown in **bold** letters are available at JITC

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INTEROPERABILITY TESTING

- **Where – Ft. Huachuca**

When – 16 Jan to 27 Feb 04– During DICE 04

- **How long – JITC will need the GMT for 6 weeks**
 - 1 week of setup, checkout, and base-lining
 - 3 weeks of X-band testing
 - One week legacy mode
 - Two weeks enhanced mode
 - 1 week of Ku-band testing
 - 1 week of wrap-up testing
- **What equipment will be needed:**
 - Large Aperture Antenna, i.e. QRSA
 - Dual Hub GMT with antenna
 - Distant end terminals and interfaces
 - Commercial satellite time (coordinated through DICE)
 - TDC-ICAP with LMST IV
 - 2 PROMINAs and 2 FCC-100s with modules

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INTEROPERABILITY TESTING PROCEDURES

- **Coordination of schedule and assets during DICE**
- **Test / data collection during DICE**
- **JITC writes report and certification letter**

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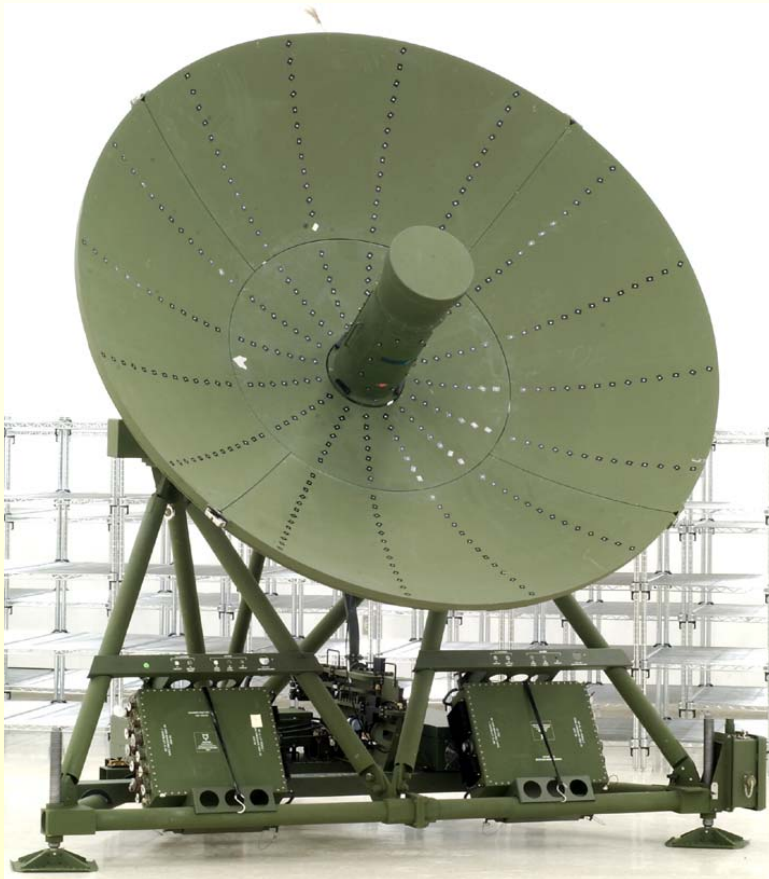
AN/USC-65 DICE04 TESTING Lightweight Multiband Satellite Terminal (LMST) Block 5



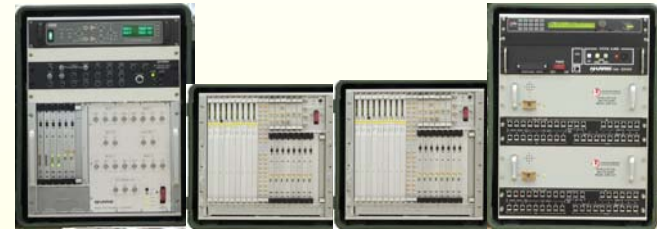


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Marine Corps LMST Variants



2.5 Meter Antenna



AN/USC – 65 (V)1

The “Hub” provides up to seven simultaneous communications paths using 1 or 2 antennas.



AN/USC – 65 (V)2

The “Mini-Hub” provides up to four simultaneous communications paths using 1 antenna.

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LMST DICE03 PARTICIPATION

- **Used “Hub” Variant**
- **Tested During Entire Exercise**
- **JITC Certified for “Specified Interfaces”**
 - **One of three IERs**
 - **Four of fifteen interfaces**

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LMST DICE03 RESULTS: X-Band

TERMINAL NAME/NOMENCLATURE	MODEM	CRITICAL INTERFACE	STATUS
AN/FSC-78B, AN/FSC-78C, AN/GSC-39B, AN/GSC-39C, AN/GSC-52	OM-73	Yes	Not Tested (Note 1)
AN/TSC-85B, AN/TSC-93B, AN/TSC-94, AN/TSC-100	MD-945	Yes	Not Tested
AN/TSC-85C, AN/TSC-93C	MD-1340	Yes	Met Criteria
AN/TSC-93C(V)4	MD-1340	Yes	Met Criteria for Data
AN/TSC-152 (LMST), AN/USC-59	SLM-8650	Yes	Not Tested
DDST, AN/USC-60A, TCS-3000 (AN/MSQ-126), LST-8000, QDHT	SLM-8650	No	Met Criteria for Voice and Data (Note 2)
AN/WSC-6(V)	SLM-8650/CQM-248	Yes	Not Tested
AN/TSC-143	SLM-8650	Yes	Not Tested
TST	DMD-15L	Yes	Met Criteria for Voice and Data (Note 2)

Legend:

DDST Downsized Deployable Satellite Terminal
LMST Lightweight Multi-Band Satellite Terminal

QDHT Quad-Band Dual Hub Terminal
TST Tactical Satellite Terminal

Note:

- 1 Voice, data, and video services were not available for testing. Bit error rate testing was conducted.
- 2 Video services were not available for testing.

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LMST DICE03 RESULTS: Ku-Band

TERMINAL NAME/NOMENCLATURE	MODEM	CRITICAL INTERFACE	STATUS
AN/TSC-152 (LMST), AN/USC-59	SLM-8650	Yes	Not Tested (Note 1)
DDST, AN/USC-60A, TCS-3000 (AN/MSQ-126), LST-8000, QDHT	SLM-8650	No	Met Criteria for Voice and Data (Note 2)
AN/WSC-6(V)	SLM-8650/CQM-248	Yes	Not Tested
AN/TSC-143	SLM-8650	Yes	Not Tested
TST	DMD-15L	Yes	Not Tested
STD-F3 (Teleport Ku-Band)	TBD	Yes	Not Tested
Legend: DDST Downsized Deployable Satellite Terminal QDHT Quad-Band Dual Hub Terminal TST Tactical Satellite Terminal LMST Lightweight Multi-Band Satellite Terminal TBD To Be Determined			
Note: 1 Voice, data, and video services were not available for testing. Bit error rate testing was conducted. 2 Video services were not available for testing.			

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LMST DICE03 RESULTS: C-Band

TERMINAL NAME/NOMENCLATURE	MODEM	CRITICAL INTERFACE	STATUS
AN/TSC-152 (LMST), AN/USC-59	SLM-8650	Yes	Not Tested
DDST, AN/USC-60A, TCS-3000 (AN/MSG-126), LST-8000, QDHT	SLM-8650	No	Not Tested
AN/WSC-6(V)	SLM-8650/CQM-248	Yes	Not Tested
AN/TSC-143	SLM-8650	Yes	Not Tested
TST	DMD-15L	Yes	Not Tested
STD-A	TBD	Yes	Not Tested
Legend: DDST Downsized Deployable Satellite Terminal QDHT Quad-Band Dual Hub Terminal TST Tactical Satellite Terminal LMST Lightweight Multi-Band Satellite Terminal TBD To Be Determined			

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LMST DICE03 RESULTS: Ka-Band

TERMINAL NAME/NOMENCLATURE	MODEM	CRITICAL INTERFACE	STATUS
Ground Multi-band Terminal	TBD	Yes	Not Tested
Ka – Large Fixed	TBD	Yes	Not Tested
GBS Ka Injection Terminal	TBD	Yes	Not Tested
Legend: GBS Global Broadcast Satellite TBD To Be Determined			

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LMST DICE04 PARTICIPATION

- **Will Use “Hub” Variant**
- **Will Test During Entire Exercise**
- **Will Test prior to DICE (Phoenix)**
- **Hope To Certify:**
 - **Two remaining IERs**
 - **Remaining X and Ku band critical interfaces**

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Questions?



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Brigade Subscriber Node (BSN): AN/TYC-25



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Brigade Subscriber Node (BSN)



Description

The Brigade Subscriber Node provides the Warfighter with mobile communication switches and transmission systems through the use of commercial switches and routers.

The Brigade Subscriber Nodes utilizes, to the maximum extent practicable, commercial equipment, to support an architecture that provides state of the art integrated voice, video and data services for use in the tactical environment while providing interoperability with the legacy systems and reach back capability to a higher headquarters.

Benefits

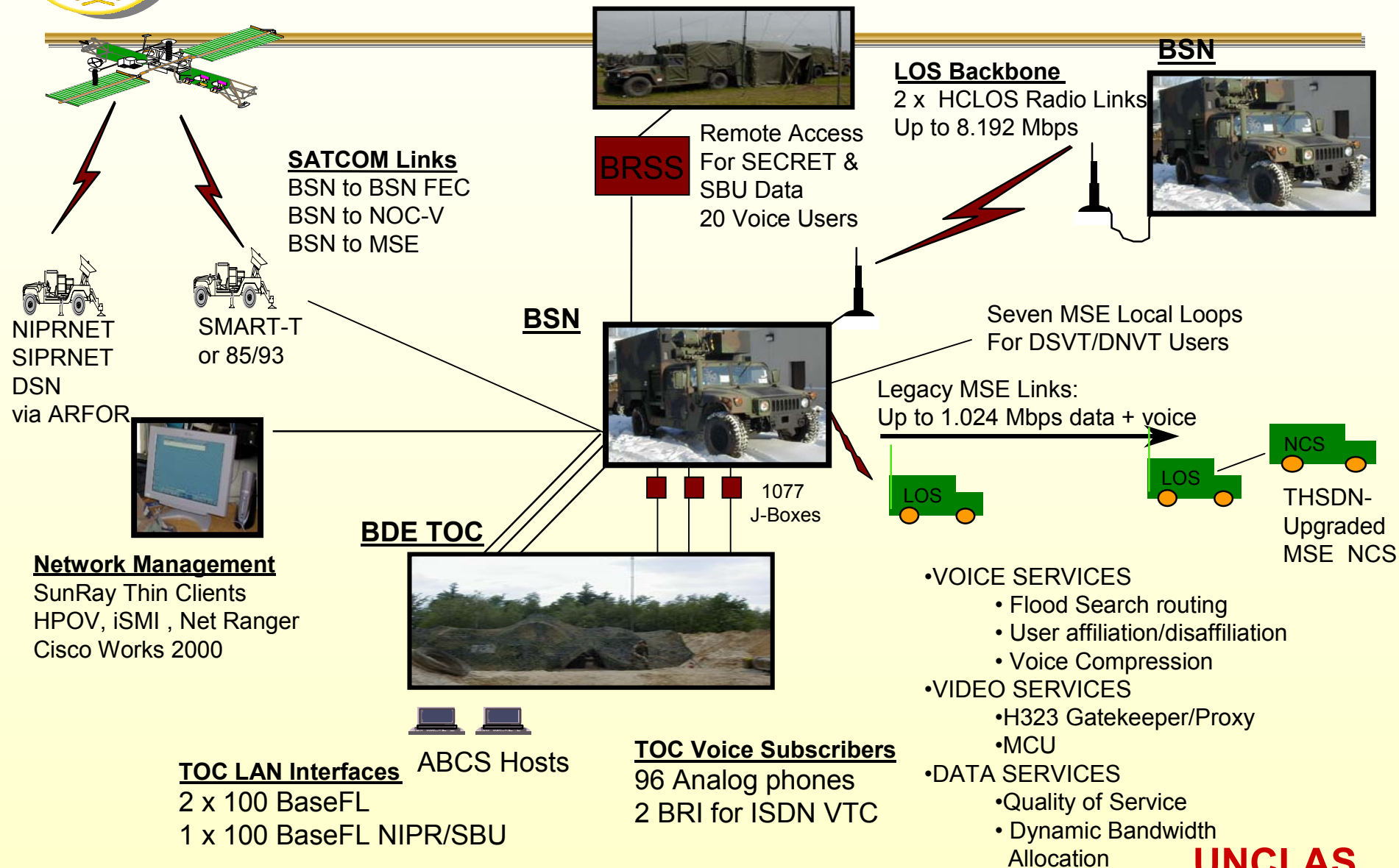
- Utilizes commercial equipment, to design an architecture that provides state of the art integrated voice, video and data services for use in the tactical environment
- Provides interoperability with the legacy systems
- Provides Network Management Capability to the BCT

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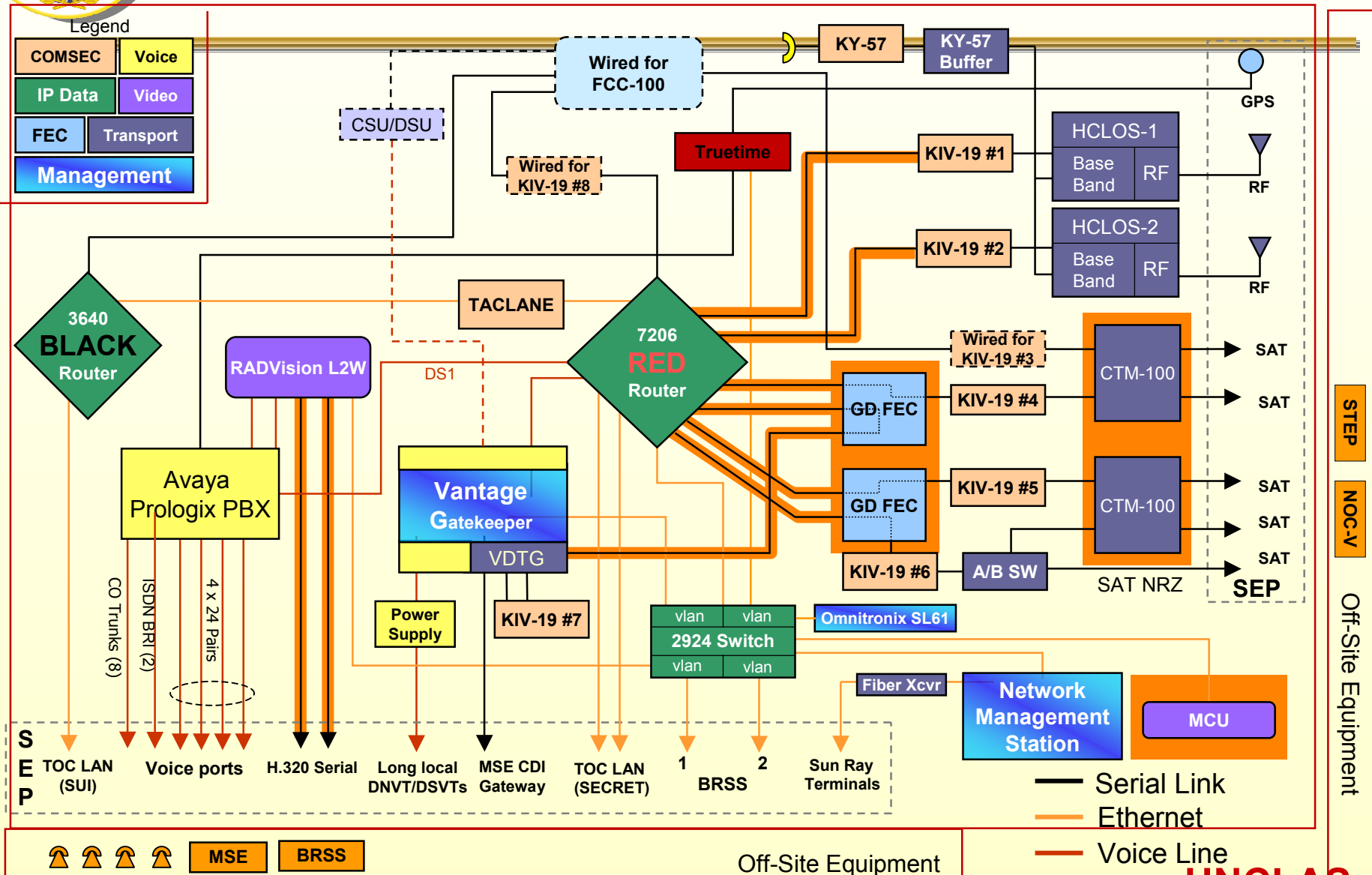
SBCT - BSN Communications Architecture



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BSN BCT 3 Diagram



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Brigade Subscriber Node

Version 2.1 Background:

- PM TRCS, (formerly PM WIN-T) directed CECOM SEC to update BSN software in order to overcome known security vulnerabilities. Tasking received on 14 July 2003.
- PM TRCS and CECOM SEC conducted CCB on 25 July 2003.
- PM TRCS established a “cut off” date of 18 July 2003, for all security patches
- CECOM SEC completed formal and regression testing on 14 August 2003 utilizing the “Green Node”, Additional testing is being conducted at this time with the 334th Signal Co. Ft. Lewis, WA as part of a COMMEX.

BSN V2.1 Consists of the following:

- [Security Patches](#)
- [WMI Upgrade](#)
- [ACL modifications](#)

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Questions ?

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END OF DAY WRAP UP / ACTION ITEMS

**Mike Napier
NGIT / JTED**

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MPC Admin Remarks

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DICE 04

SCHEDULING

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NETWARS

**MAJ Thomas Powers
USA / DISA**

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DICE 04 WEBINAR

**Martin E. Mendoza
GS / JTED**

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END OF DAY WRAP UP / ACTION ITEMS

**Mike Napier
NGIT / JTED**

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DICE 04

FPC

**Tentatively scheduled for ?? December
at JCSE, MacDill AFB, FL.**

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DoD Interoperability Communications Exercise 2004 (DICE 04)

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